

In-class writing prompts: Structure & Advice

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The Problem

Writing well is not easy¹. In part that is because putting our ideas down on a page involves thinking: deep, careful, thinking. If our thinking is unclear, so too will be our writing. Writing in classes can also be difficult because we write for so many purposes: to persuade, to elaborate, to fill the page requirement, or to convince the instructor that *I know the answer!* and I've cleverly hidden it somewhere in this jungle of sentences if only you look carefully².

So let me be plain about what I am looking for in your writing: I would like you to *clearly, concisely, evaluate evidence around some argument or claim*.

¹ Ask anyone.

² Word vomit is rarely good writing!

The Plan

That is a lot to ask of you, I know. But I am equally certain that you can get there with some practice. So here is the plan: I will ask you to read, listen to, or watch some piece that is relevant to our class. The piece will usually have a clear argument and, more or less overtly, discuss evidence. Your job will then be to identify, think about, and weigh the evidence and then write a short, *pithy*³ response to some questions I ask.

You will do this a number of times. [Repetition and feedback are essential to improvement](#). I will offer at least 15 of these prompts, each worth 10 points. You can earn a maximum of 100 points in this category. Thus, you have room to make mistakes or even flounder a bit and still end the semester in a good position.

³ Look it up. I do not mean the thing about fruit.

The Format

I will give you one or two questions to answer in 1–2 paragraphs. In general, each paragraph will be your answer to one of those questions⁴. Each paragraph should begin with a strong topic sentence and then, in a clear, organised way, explain the evidence or support for the argument you make in your topic sentence. Note that I want you to be a scientist and evaluate the weight of evidence, not be a lawyer, arguing for a particular side for fun or profit. Thus, you might end up saying something like, “the evidence is equivocal” and that is just fine by me.

⁴ I will tell you in the instructions if I'm looking for a different format.

The Criteria

The rubric for grading involves the following criteria:

- **Topic sentence** Craft a compelling, accurate topic sentence that makes a claim or argument. *Your paragraph needs to say something, and that something should be clear from the very start.*

- **Weight of evidence** Reference specific cases, facts, data, or logic to provide evidence to bear on the claim or argument. Convey the weight of evidence with context and nuance (as opposed to presenting evidence as Right or Wrong). *The point of this exercise is to weight evidence, so please be clear about why you are coming to a particular conclusion or argument. Notice that I am not asking you to come to a particular conclusion or use every bit of evidence. Just be clear about the evidence you find compelling and how you weight it.*
- **Logic** Your conclusion must flow from the evidence you provide. *Again, be a scientist rather than deciding on an answer and then listing evidence. Start with the evidence to reach your conclusion.*
- **Organization** Write with clear organization and flow—no meandering sentences or jumbled lists. *This applies both to the order of sentences, but also the order of ideas or clauses within the sentences. Strong organization makes your thinking plain; poor organization makes this a guessing game.*
- **Clarity & concision** Write clearly and concisely—no fluff or filler, no ambiguous grammar

My Advice to You

Let me offer some thoughts about the qualities I am looking for in your writing (i.e., “clearly, concisely, evaluate evidence around some argument”). This advice applies to the writing prompts in lecture, but also to the writing you will doing in lab and elsewhere. They are, I think, pillars of good explanatory or argumentative writing.

Clarity

By clarity I mean the intelligibility, comprehensibility, plainness, and precision of your writing. I need to pick up what you’re putting down. Having read a lot of student papers I have come to seem two general categories of problems with clarity, which I might charitably call, “I know what I mean...” and “I will science (jargon) the \$hit out of this.” Both make the reader work hard to understand and neither improves clarity.

The problem with the first of these is that while you might know what you mean, I cannot follow along. Often this comes from a lack of care or thought about the reader’s perspective. Sometimes a sentence starts heading in one direction and then we are talking about rabbit holes. Sometimes ideas are repeated, but not always sequentially. Sometimes a sentence introduces a cool idea but never. Fragments are. Sometimes a person tries to connect multiple distinct ideas with a comma, I’m confused when it looks like a list but isn’t. Sometimes a person repeats their ideas, making me wonder if there is some distinction I missed.

Often the relationship between ideas is just muddled, as if you are casually pointing out two people at a party and saying they are related. But I don’t know these people, I do not know what “related” means, not precisely. (Siblings? Significant others? Both members of the Fraternal Order of Mooses?). It makes me

wonder why you're telling me there is a relationship. I need context and guidance. I need structure. Even the order in which the ideas are presented generates structure, so if you give me a scatter shot of ideas, that's how they'll be arranged in my mind; all over the place!

Imagine you're explaining something complicated to a seven year old with a short attention span. Then clarify it further. Remember, *you* are not your audience; *I am*. You are not writing to get your ideas on paper for your own purposes (those are called notes). You are writing to convey ideas and understanding. So **keep your audience in mind**. *Guide* the reader through comparisons (e.g., "The response was five-fold greater in the treatment group than the controls"), highlight the relationships between ideas or studies (e.g., "While x found this, y found the opposite" or "Similarly, ..." or "In contrast, ..."), and provide a clear structure (e.g., introduce ideas from small to large, first to last, or similar).

The second problem is sort of the opposite of the first, but leads to similar issues with clarity. I think some people think something along the lines of, "Cool! I get to write *Science*! Let me throw down all of the *Science* words I know!" One issue is that this leads to unexplained jargon. Look, I'm a professor, but that doesn't mean I know all of the terms in all of these fields. Help a reader out! (Sometimes I am pretty sure you, the author, do not know what these words meant either... just because it sounds cool doesn't mean you should use it. Simpler is often better, even in science.)

Sometimes authors will imply mechanisms or assume I know about them. But again, what is blindingly obvious in your head is probably not in mine. I need you to help me connect the dots. Hold my hand and guide me through the logic. I promise I will not be offended if you explain even simple things.

Of course some students' papers combined elements of both categories⁵! In the end, it does not matter. The issues with clarity mean that I have a hard time understanding what you are trying to say, so your thinking might be admirable, but I might not be able to tell simply because I am confused by your writing.

⁵ Going for the double! Well done!

Concision

"Giving a lot of information clearly and in a few words; brief, but comprehensive."
—New Oxford American Dictionary

In essence, to write concisely means to get rid of everything that might cloud your point. Even strong logic and understanding can be hidden by a blizzard of extraneous words or details. Your job is to strip these away⁶. While it is not incorrect to write, "While comparing individuals in control and treatment groups in a study in 2002 Smith and colleagues found that those given a placebo had just as much of a reduction in self-reported test-taking anxiety than those given the new drug, relaxenol," that's quite a lot to process and keep in mind from start to finish. Could we not say this more succinctly, for instance as, "Smith et al. (2002) found that a placebo reduced self-reported test-taking anxiety as much as relaxenol," or even "Placebos were as effective as relaxenol in reducing

⁶ Even if they sound "science-y"! See the *Clarity* section, above.

test-taking anxiety (Smith et al. 2002)?” I prefer this last version, myself, because it places the emphasis on the comparison rather than the authors or what they did. The point of this word-jitsu is that our point is made clearer when we say it concisely. Conciseness and clarity often go hand-in-hand.

Writing concisely is not easy. Most of us have to go through drafts to get there. We start with our weedy, thicket of a paragraph and cut and refine until we get something that is much shorter and clearer. It takes practice, but there are two hallmarks of wordy or discursive writing you should look for. First, try finding the verb. If the action is towards the end of the sentence you are probably writing passively and that usually means more words and more work for the reader. Compare where the word, “found,” is found in the first and second versions of the sentence about the Smith et al paper in the prior paragraph. Which version sounds more active and authoritative? Which version sounds like the author knows what they are talking about? My advice is this: Write actively; put the verb up front.

Second, look for “weasel words⁷,” that imply you are unwilling to commit to a statement or position. Look carefully for such words for phrases and destroy them on sight. If you find yourself tempted to use a weasel word or phrase, stop yourself and ask what it is you are really trying to say. Usually passive and weaselly writing signals that you are uncertain of what you mean. Remedy the lack of understanding rather than wrapping it in a torrent of words⁸.

⁷ See https://en.wikipedia.org/wiki/Weasel_word

⁸ Trust me: I’m pretty good at spotting what you do and do not understand!

Evaluative

Good writing builds to something—an argument or point of view, or evaluating an argument or point of view. There needs to be a sense of direction. For our purposes, writing is always, always about evaluating evidence around an argument. It is not just restating details or evidence from sources⁹, but rather telling the reader what these details or evidence *means* for or about some assertion or point of view¹⁰. Most of the time I’ll be providing a set of questions to answer, so your point or argument will be about your answer(s). But this extends to other settings, too. In any case, you will find that clarity and conciseness become much easier if you know what you think.

⁹ A list is not an argument

¹⁰ This does not work well when someone does their best to remove themselves from equation, for instance using weasel words to avoid committing to a statement.

Usually, your point should be made in the first sentence of a paragraph, your topic sentence. Look at mine, for examples. Most of the time they make a point that is then supported by logic or evidence. This does not work as well if we have to wait until the end of the paragraph to see your point. That leads to the reader having to guess where you’re going, often getting it wrong. Instead, tell us what you are arguing, then support it.

A collection of thoughts, advice, pet peaves, and rants¹¹

- **Papers and data do not conclude; authors do.** Studies do not aim or set out or examine, the authors do, but they might show or illustrate or demonstrate something or other.
- **Neither papers nor authors PROVE OR DISPROVE anything.** Proofs

¹¹ Some repetitive of the above. I really mean them!

are for mathematicians, not for us lowly scientists. Our conclusions are always, always tentative. Including the law of (universal) gravitation¹². Instead, talk about the weight of evidence for or against an assertion.

- **Finish your comparisons.** If you wrote, for instance, that “Gold doubloons make better bait for Leprechauns,” your reader is likely screaming (silently, ineffectually), *Than what?! Gold bullion? Chocolate? Lucky charms?* It might be obvious to you, but the reader is, thankfully, not in your head.
- **Be precise when possible.** Sometimes it is enough to say that most children get more candy at Halloween than Easter, but more often it is important to know how much more. One extra candy corn? Twice as much chocolate? And what’s the unit of comparison anyway? Mass? Calories? How long it lasts? Be similarly precise about the logic or mode of action. Is the idea that since kids have some control over how many houses they “hit” while trick-or-treating their haul reflects the time available to them and their efficiency whereas during a typical Easter egg hunt there is a finite amount of candy that is then divided amongst the participants? Or is it that parents purchase less candy for their own kids during Easter than for the neighborhood during Halloween because they don’t want to be viewed as stingy? These are obviously very different mechanisms that might lead to the same pattern.
- **Use connecting or comparing words to provide guidance for the reader.** If you leave it to the reader to connect the dots, we probably will not. Also, even a tiny bit of guidance can avoid the staccato of a series of short declarative sentences. For instance, how could you rewrite this? “Smith et al. (1995) found a large tentacle on the short. Victor and Vector (2001) argued it was not actually a tentacle. The isotopic signature was inconsistent with a predator’s diet (Rolf et al. 1999).” Wouldn’t a “however” and maybe a “moreover” or “indeed” or some such transition help guide the reader?
- **Avoid extraneous words and casual phrases that add nothing.** For instance, a sentence like, “The authors looked into the validity of Cthulhu by using submersible drones to look for it in the ocean, but came back empty handed” you would be clearer, more direct, and a bit shorter as, “They did not find Cthulhu in 800 hours of searching with submersibles in the Atlantic.” (Honestly, I might freak out if I have to read “look at/into/for” again. I mean, I would assume they were “looking into” the topic since you’re citing them. Instead, what are they doing or finding? How are they “looking” into it? And more importantly, what did they find?)
- **Avoid weasel words.** If you find yourself trying to qualify or soften your statement, that is a good time to step back and ask yourself what it is, exactly, you are trying to say. Perhaps your subconscious use of weasel words or dread of saying something directly comes from a lack of understanding? Almost always your writing would be improved by removing these words and phrases. In any case, here are some types of weasel words from [Wikipedia](#):

¹² And just for completeness, No, Isaac Newton did not “prove” gravity exists, even setting aside the silly apple story. Of course gravity exists! The evidence of it is in and around us all the time, every day! No one doubted its existence. What Newton did was 1) write down some equations that make lovely predictions about its actions and 2) showed that these predictions worked just as well for planets as for stuff on Earth. But honestly, we still don’t know what gravity is, exactly, or really even how it works. We just know its effects.

1. Numerically vague expressions (for example, “some people”, “experts”, “many”, “evidence suggests”)
2. Use of the passive voice to avoid specifying an authority (for example, “it is said”)
3. Adverbs that weaken (for example, “often”, “probably”)

- **Words and phrases to avoid**

- “Feel.” I do not care how you “feel”¹³! I care how you weigh evidence, think through logic, and so on.
- “Prove”/“disprove”. See above.
- “It” or “that”, unless it is very, very clear what you are referring to.
- “Adaptation”, unless you mean the evolutionary process. Same with “evolve.”
- Any words that imply values (i.e., good or bad)
- Any words that imply goals or intentions of animals (e.g., “Cthulhu wants to ensure its survival.”) This is even worse when one talks of species trying to ensure their persistence. Just walk away from these assertions!
- Contractions. They smack of informal writing. Sure, I use them in these conversational readings, but I would never do so in a paper intended for publication. Treat your writing in this class as if it will be published.

¹³ Well, as a person, sure, but not in these papers.

- **Spell out numbers** between zero and ten, and then use numerals for 11 and above¹⁴. The exception is a measurement or count data, in which case you should use numerals for all of numbers.

¹⁴ This *is* a stylistic thing, and you will see some journal prefer to use numerals all the time. But for my class, please follow my style guide!